

Histology of Urinary system

- **Proximal Convoluted Tubule (PCT)**

Cuboidal to low columnar epithelium

- **Loop of Henle**

Thick part	Thin part
simple cuboidal epithelium	simple squamous epithelium

- **Distal Convoluted Tubule (DCT)**

Simple cuboidal epithelium

Proximal Convoluted Tubule (PCT)	Distal Convoluted Tubule (DCT)
cuboidal to low columnar epithelium	simple cuboidal epithelium
Acidophilic cytoplasm Brush border due to abundant microvilli Basal (striations) invaginations	smaller cells with less microvilli and less acidophilia The cells have basal invagination and less lateral interdigitation

- **Collecting Tubules and Ducts**

Simple cuboidal epithelium

Responsive to ADH

- **Juxtaglomerular Apparatus**

- 1-Juxtaglomerular cells**

Modified smooth muscle fibers of afferent arteriole.

JG cells produce renin.

- 2-Macula densa cells**

Modified cuboidal epithelium of proximal part of distal convoluted tubules

- **Urine Passages : (Calyces, pelvis, ureter, and bladder)**

Transitional epithelium

- **Ureter**

Transitional Epithelium with lamina propria

- **Urinary bladder**

Transitional epithelium or Urothelium with lamina propria

- **male Urethra**

Prostatic Urethra	Membranous Urethra	Penile Urethra
Transitional	Pseudostratified Stratified columnar	1.Pseudostratified columnar (up to fossa navicularis) 2. Stratified squamous (Terminal part) 3. Thin lamina propria

- **Bulbourethral Gland**

Compound tubuloacinar gland.

- **Female Urethra**

Transitional epithelium

Stratified squamous epithelium (Terminal part)

Muscular layers (Muscularis)

Ureter	Urinary bladder	Female Urethra
i. inner longitudinal ii. outer circular In the lower 3 rd there are 3 layers found: i inner longitudinal ii. middle circular iii. Outer longitudinal	I. Outer longitudinal layer. II. Middle circular layer. III. Inner longitudinal and oblique layer. IV. Lymphatic capillaries plexus.	▪ Inner longitudinal layer ▪ Outer circular layer